Name: _____   **Date:** _____

Answer Key: Launch Web Apps 8th Grade Programming Challenge

Students debug DOM events, calculate CSS specificity, and construct asynchronous logic to solve complex architectural problems in modern front-end development.

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1. An 8th-grade developer wants to select every odd-numbered <li> element within a <ul> to give them a striped background. Which CSS selector is most efficient for this task?

Answer: B) li:nth-child(odd)

> The :nth-child(odd) pseudo-class dynamically targets every other element in a series without needing manual class assignments for each tag.

2. In the Document Object Model (DOM), the standard method used to update the text content of an HTML element via JavaScript is _____.

Answer: A) textContent

> The .textContent property allows JavaScript to access and modify the raw text within an element, which is safer and more performant than innerHTML.

3. A CSS rule with an ID selector (#header) will override a rule with a class selector (.main-title) applied to the same element due to higher specificity.

Answer: A) True

> CSS specificity rules dictate that IDs are more specific (1,0,0) than classes (0,1,0), meaning the ID styles will take precedence regardless of their order in the stylesheet.

4. When creating a responsive grid for a portfolio, which CSS property allows an element to automatically wrap to the next line when there isn't enough horizontal space?

Answer: C) flex-wrap: wrap;

> The flex-wrap property in a Flexbox container determines whether the flex items are forced into a single line or can fragment onto multiple lines if space is limited.

5. To ensure an image remains accessible to screen readers even if the file fails to load, developers must include the _____ attribute.

Answer: C) alt

The 'alt' (alternative text) attribute provides a textual description for non-visual browsers and is a critical component of web accessibility standards (WCAG).

6. JavaScript is a compiled language that must be turned into an .exe file before it can run inside a Google Chrome or Firefox browser window.

Answer: B) False

JavaScript is an interpreted or Just-In-Time (JIT) compiled language executed by the browser's engine (like V8) directly from the source code, not as a standalone executable.

7. Which of these represents a JavaScript 'Event Listener' that triggers a function specifically when a user finishes typing in a text field?

Answer: B) element.addEventListener('keyup', ...)

The 'keyup' event fires when a user releases a key, making it the standard choice for monitoring real-time text input or keyboard interactions.

8. In the CSS Box Model, the space between the element's actual content and its border is known as _____.

Answer: B) Padding

Padding is the internal space inside the box. Margin is the outer space between boxes, and border sits between the padding and margin.

9. Which HTML element is the most semantically correct for grouping the primary navigation links of a website?

Answer: C) <nav>

The <nav> tag provides semantic meaning to search engines and assistive technologies, identifying that the enclosed content is intended for navigation.

10. Using 'const' to declare a variable in JavaScript means the value stored in that variable can never be changed or reassigned later in the code.

Answer: A) True

Variables declared with 'const' (constant) are block-scoped and cannot be reassigned. This helps prevent accidental bugs in complex program logic.